



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/539,394	03/31/2000	James Paul McCarthy	199-1452	9656

7590 12/18/2002

John G Chups
Chups & Alberti P C
31313 Northwestern Highway
Suite205
Farmington Hills, MI 48334

EXAMINER

AVERY, BRIDGET D

ART UNIT	PAPER NUMBER
----------	--------------

3618

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/539,394

Applicant(s)
McCarthy, James Paul

Examiner
Bridget Avery

Art Unit
3618



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 6, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Art Unit: 3618

DETAILED ACTION

Claim Objections

1. Claim 14 is objected to because of the following informalities: On line 4, "toque" should be changed to --torque--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 8 and 14, line 6, applicant claims "at least one friction plates" which is confusing.

It is suggested that applicant amend the claim to recite --at least one friction **plate**-- or --a plurality of friction plates--.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

Art Unit: 3618

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Hara et al. (US Patent 5,713,814).

Hara et al. discloses a hybrid vehicle drive system including a generator (5) operatively connected to the engine (1) to produce a reaction torque, effective to control a first speed; a clutch (Cd) assembly selectively coupled to the generator (5) to selectively augment the reaction torque, thereby cooperating with the generator (5) and capable of controlling the first speed; and a controller (10) which is coupled to the generator (5), engine (1), and to the clutch assembly (2), the controller (10) being effective to determine the amount of reaction torque required to control the first speed, based upon the amount of reaction torque, to cause the generator (5) and clutch assembly (2) to cooperatively provide the reaction torque. See column 5, lines 17-40.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. ('814) in view of Sumi (US Patent 6,054,776).

Art Unit: 3618

Hara et al. discloses the feature described above.

Hara et al. is silent regarding the type of clutch used and fails to show a valve assembly.

Sumi discloses a hybrid electric vehicle including an engine (1) having an output shaft; a motor/generator (2) coupled, by a planetary gear set (35), to the engine (1) which produces a reaction torque; a controller; and, a clutch assembly (36) coupled to the generator (2); the clutch (36) is coupled to a source of pressurized fluid by an actuatable valve assembly (36a) and the controller is effective to actuate the valve assembly.

Based on the teachings of Sumi, it would have been obvious to one having ordinary skill in the art, at the time of the applicant's invention to modify the system of Hara et al. to include a clutch assembly coupled to a source of pressurized fluid and a valve assembly to provide a conventional hydraulically operated clutch assembly. With respect to claim 8, motor/generators are conventionally designed to include a stator and rotor assembly. Applicant's attention is directed to rotary elements 21 and 22.

6. Claims 8 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. (US Patent 5,713,814) in view of Thomas et al. (US Patent 6,360,864).

Hara et al. discloses a hybrid vehicle drive system including a generator (5) operatively connected to the engine (1) to produce a reaction torque, effective to control a first speed; a clutch (Cd) assembly selectively coupled to the generator (5) to selectively augment the reaction torque, thereby cooperating with the generator (5) and capable of controlling the first speed; and

Art Unit: 3618

a controller (10) which is coupled to the generator (5), engine (1), and to the clutch assembly (2), the controller (10) being effective to determine the amount of reaction torque required to control the first speed, based upon the amount of reaction torque, to cause the generator (5) and clutch assembly (2) to cooperatively provide the reaction torque. See column 5, lines 17-40.

Hara et al. lacks the teaching of friction plates and a divider plate.

Thomas et al. teaches a clutch divider plate (10) and friction plates (34, 36).

Based on the teachings of Thomas et al., it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hara et al. to include friction plates and a divider plate to efficiently transmit torque. With respect to claim 14-19, the method for controlling the speed of an engine, which includes selectively activating the generator to produce a negative torque and selectively and frictionally engaging a rotor assembly to lower the speed of the engine is obvious in view of Hara et al. and Thomas et al.

7. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. ('814) and Thomas et al. ('864) as applied to claim 8 above, and further in view of Ito et al. (US Patent 3,646,835).

The combination of Hara et al. and Thomas et al. teach the features described above.

The combination of Hara et al. and Thomas et al. lack the teaching of a drum and piston.

Ito et al. teaches a control system including a clutch with a drum (27) and piston (28).

Art Unit: 3618

Based on the teachings of Ito et al., it would have been obvious to one having ordinary skill in the art, at the time the invention was made, to modify the combined system of Hara et al. and Thomas et al. to include a drum and piston to connect and drive the clutch.

Response to Arguments

8. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Peters et al. shows an internal combustion engine shutdown method and control system.

Pels et al. shows an apparatus for controlling the idling speed of an internal combustion engine.

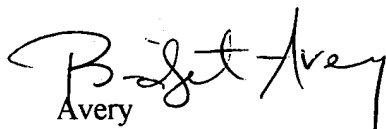
Shimasaki et al. shows a hybrid vehicle.

Tsuzuki et al. shows a control system for vehicular drive unit.


Yamaguchi et al. shows a hybrid vehicle.

Art Unit: 3618

10. Any inquiry concerning this communication should be directed to Bridget Avery at telephone number (703) 308-2086.


Avery

December 11, 2002


BRIAN L. JOHNSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600
12/12/02